

**1996 AMIA**  
**ANNUAL FALL SYMPOSIUM<sup>SM</sup>**  
**Formerly SCAMC**

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*Beyond the  
Superhighway:  
Exploiting the  
Internet with  
Medical Informatics*

**1996 AMIA**  
**ANNUAL FALL SYMPOSIUM<sup>SM</sup>**  
**Formerly SCAMC**

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American Medical  
Informatics Association*

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Program Chair

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# Preface

This *Proceedings* contains the papers and abstracts presented at the 1996 Annual Fall Symposium of the American Medical Informatics Association. Although the first meeting by this name, the Annual Fall Symposium carries on the tradition of the Symposium on Computer Applications in Medical Care (SCAMC), the premier annual medical informatics conference in the world since 1977. It is fitting that the meeting's twentieth anniversary is marked by a record number of submissions and presentations. I believe the contents of this *Proceedings* also set a record for quality, reflecting the advances in our relatively young field and the maturation of its researchers and practitioners.

This year's theme, "Beyond the Superhighway: Exploiting the Internet with Medical Informatics," is also a fitting subject for marking a milestone year. Long the domain of university researchers, the Internet and World Wide Web were fast becoming household words while the medical and medical informatics communities lagged behind. Despite routine use of the Internet by the end of the 1970s, the word "Internet" did not appear in the Medline database until 1992, when it was cited eight times. Since then, the medical informatics community has made up for lost time—the number of citations has tripled annually. By 1995, there were 206 citations that satisfied a search for "Internet," "World Wide Web," or WWW." I am happy to report that the leader that year, by far, was the SCAMC *Proceedings*, with 23 citations (*The New England Journal of Medicine* edged out *JAMIA, the Journal of the American Medical Informatics Association*, 9 to 8). This year's *Proceedings* makes an even greater contribution to the world's medical literature.

The Internet and the Web are proving to be ideal adjuncts for medical computing, breaking down the barriers to access that have prevented sharing and dissemination of systems. A survey of the past nineteen SCAMC *Proceedings* shows literally thousands of promising applications that failed to meet their full potential, undoubtedly due in part to their stand-alone, isolated nature. In this *Proceedings* you will find many examples of applications that exploit the opportunities presented by the Internet and the Web to make systems more accessible and, therefore, more usable and useful.

Conversely, medical information science has much to offer the Internet and the Web. The information overload in medicine, lamented for years, has reached new extremes and we find ourselves "drinking from a fire-hose" of information. Freely available Internet search

engines seem to be capable of answering any question if one is willing to wade through the thousands of documents they offer. Medical informatics provides solutions; not only can we exploit the Internet for our purposes, but we can also tame it with our methods. In this *Proceedings*, you'll find examples of how information retrieval, expert systems, controlled vocabularies, clinical systems, networking, education, and cognitive science provide us with techniques that are relevant to the new challenges presented by the Internet.

Of course, medical informatics is not just about the Internet, and neither is this *Proceedings* or the symposium it represents. As in the past, you will find all areas of health care informatics represented. We defined seven tracks into which we shoehorned the diverse contributions of our authors: Training, Education, and Cognition; Policies and Standards; Expert Systems and Algorithms; Information Retrieval and Digital Libraries; Clinical Information: Storage and Use; Health Information Networks; and User Interfaces and Hospital Systems. These only hint at the great diversity to be found in the symposium. The track names are less important than the individual papers they subsume. This *Proceedings* will serve as a valuable resource for those who wish to learn who's doing what and how to build on that experience.

If anyone reads the preface of the *Proceedings* at all, they most likely do it long after the symposium is over. If you attended the symposium, you know that there was much offered that is not represented between these pages. If you weren't there, think about attending the next one. Reading the papers cannot begin to match the excitement of hearing more than 150 presentations, witnessing nearly 80 demonstrations, and interacting with close to 100 poster presenters, not to mention the elements of the meeting that are not recorded here, including the opening Plenary Session, nine track keynote lectures, 50 tutorials, 19 panels, 18 workshops, 26 "Meet the Experts" sessions, the American College of Medical Informatics Distinguished Lecture, numerous award presentations, Working Group meetings, and commercial exhibits.

The 1996 symposium was the product of tremendous teamwork. This year's Program Committee labored longer and harder than any I have known, and I believe the result is self-evident. Each has given generously of his or her time and made creative intellectual contributions. I owe each of them a personal debt. The Program Committee members are Mark Tuttle, Vimla Patel, Mark

Musen, Moon Mullins, Alexa McCray, Dan Masys, Gil Kuperman, George Hripcsak, Sue Henry, Chris Chute, Randy Barrows, and Andrew Balas. The AMIA staff has also worked incredible hours to make sure all the minute details of the meeting, the programs, and the *Proceedings* are not only done, but done well. Their pride in their work has been an inspiration to me. Led by Executive Director Jeanne Nevin and Meetings Manager Vernelle Henry, they are Janice Kennedy, Andria Brummitt, Monica Jonas, Sharon Jadrank, Kristina Sims, Michelle Daniels, and Debbie Preusse. There have also been contributions from the AMIA membership, including the Working Group chairs, who helped develop special parts of the program; Ted Shortliffe, who helped with the hardest task (getting a keynote speaker); and, of course, the reviewers. I also thank each of the authors who contributed their intellectual effort to the symposium. I have had personal support from Paul Clayton and the rest of the gang at the Columbia University Department of Medical Informatics, with their unofficial contributions, such as covering for me when I was absorbed in Program Chair duties. Any personal contributions I made to the meeting were the result of training I

received under previous Program Chairs Paul Clayton, Mark Frisse, Charlie Safran, Judy Ozbolt, and Reed Gardner, and AMIA's former executive director, Gail Mutnik. Acknowledgments would not be complete without recognizing the sacrifices of my family, who gave me up to AMIA for some periods of time and put up with my distractedness for others.

With this introduction, I now urge you to venture on into the *Proceedings*. Whether you enter via the table of contents, the author list, or the subject index, I think you will find something of value. If you are looking at this during the twentieth century, you will find relevant methods, results, and discussion. If you are looking during the twenty-first century (or beyond!), you will find an unparalleled archive of the state of the art of medical informatics. The papers and abstracts contained herein include landmark articles by current leaders of the field and the first significant efforts by tomorrow's.

*James J. Cimino, M.D.  
Program Chair*

# 1996 AMIA Annual Fall Symposium

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This paper was inadvertently omitted from the Proceedings of the Fifteenth Annual Symposium on Computer Applications in Medical Care (SCAMC).

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Burt, T.	972	Clements, M.	904
But, P.P.H.	821	Cline, T.L.	970
Butler, S.	893, 904	Clyman, J.I.	572
Buttimore, A.L.	979	Cochran, D.	747
Caban, A.	978	Cohen, H.	886
Caldwell, C.W.	284	Cohn, S.P.	269
Camerino, P.W.	363	Coiera, E.W.	17
Campbell, E.H.	159	Cole, B.	983
Campbell, E.M.	388, 552	Cole, W.G.	84, 150, 902
Campbell, K.C.	398	Coleman, L.T.	916
Campbell, K.E.	269	Collins, D.	135
Canfield, K.	175	Collins, M.D.	951
Cantor, R.J.	923	Combi, C.	527
Capozzi, C.	885	Consorti, F.	115
Caprotti, M.	825	Cook, J.L.	483, 990
Carlson, D.	418, 868	Cooper, G.F.	27, 582
Carlson, D.A.	234	Corman, R.G.	873
Carlson, R.W.	150, 926, 956	Cornwall, G.	947
Carlsson, M.	189	Cortesi, M.	752
Carter, J.H.	862	Côté, R.A.	80
Cassidy, P.	989	Covvey, H.D.	613
Castilho, J.M.V.	857	Crangle, C.E.	150, 926
Catrou, P.G.	844	Crawford, J.	957
Cawsey, A.	423	Cribbs, A.	714

Curran, K.	946	Durbin, E.B.	852
Curran, K.E.	832, 954, 959	Dusserre, L.	323
Curran, M.A.	832, 946, 954, 959	Eades, B.L.	970
Curtis, J.A.	970	Eagon, J.C.	130
D'Alessandro, M.P.	986	East, T.D.	234, 418, 868
Dagher, A.P.	927	Eckel, R.	473
Daily, J.P.	942	Einbinder, J.S.	985
Daine, D.	873	Einbinder, L.H.	747
Dalal, M.	684	Einreinhofer, S.A.	55
Dasgupta, B.	567	Eisenstein, E.L.	443
DasGupta, S.	840	Elfrink, V.L.	977
Davis, A.	926	Elhanan, G.	348
Davis, A.N.	84, 150	Eliot, C.R.	7
Davis, G.	892	Elliott, C.R.	820
Dayhoff, R.E.	653	Ellis, A.I.	782
de Blieck, R.	2	Elstein, A.S.	219
DeBrota, D.J.	830	Erkonen, W.E.	986
Deibel, S.R.A.	924	Erlbaum, M.S.	84, 150, 901, 902, 926, 956
Delisle, E.	738	Ertle, A.R.	552
Dembitzer, A.D.	60	Estey, G.	562, 628, 922
Dennison, J.B.	876	Evans, D.A.	159, 388
Deretchin, L.F.	911	Fackler, J.	729
Desai, N.	940	Fackler, J.C.	608
Detmer, W.M.	931, 933	Fagan, L.	812, 943
Deutsch, L.	843	Fagan, L.M.	150, 926, 956
Dexter, P.	989	Falsone, J.J.	55
Dickinson, M.	135	Falzoni, R.	894
Dicksen, K.	893	Famiglietti, K.T.	988
Diehl, M.	896	Fanikos, J.	498
Diepgen, T.L.	46, 864	Far, F.E.	403
DiFranco, D.	915	Farrell, J.J.	935
Dilling, T.J.	398	Faughnan, J.G.	866
Dionne, R.A.	259	Feiner, S.	684
Divita, G.	945	Felciano, R.	943
Doiley, C.R.	832	Felciano, R.M.	757, 812
Dolin, R.H.	522	Feld, R.D.	986
Donsez, D.	889, 890	Fellencer, C.A.	12
Doolittle, M.H.	944	Feng, J.	952
Douglas, K.	972	Fenstermacher, K.D.	910
Downey, J.	966	Fieschi, M.	378
Downs, S.M.	2, 925	Fincke, B.G.	860
DuBois, K.	982	Finley, S.W.	787
Dudeck, J.	777	Finney, D.M.L.	986
Dudeck, J.W.	512, 841	Fiocchi, S.	194
DuMouchel, W.	858	Fischer, C.	822
Duncan, K.A.	604	Fischer, M.R.G.	856
Duncan, L.	184	Fiszman, M., Jr.	894
Duncan, R.	960	Fitzmaurice, J.B.	562, 922
du Plessis, J.P.	963	Flahault, A.	669
Du Pont, J.	838	Flanagan, J.	858

Flanagan, J.R.	.618	Glazener, T.	.989
Fleming, D.W.	.184	Glowinski, A.J.	.853
Foote, S.	.969	Goldberg, H.I.	.850
Ford, M.	.638	Goldsmith, D.M.	.985
Forslund, D.W.	.483, 990	Goldwein, J.W.	.398
Forsum, U.	.189	Golichowski, A.M.	.895
Foster, J.	.844	Gong, L.	.867
Foucher, C.	.742	Goodson, A.	.135
Fowler, J.	.363	Goodwin, M.A.	.898
Fox, P.T.	.892	Grant, A.M.	.738
Franchi, G.	.752	Green, J.	.870, 975
Frank, S.A.	.653	Green, S.S.	.827
Frankenberger, M.	.623	Greenes, R.A.	.125, 343, 724, 924, 942
Franklin, M.	.418, 868	Gretes, J.A.	.954
Franklin, M.A.	.234	Griesser, V.	.70
Fraser, H.S.F.	.762	Gu, H.	.274
Frawley, S.J.	.184, 835	Günther-Sutherland, A.	.856
Freedman, J.A.	.882	Gunther, K.	.893
Freedman, M.	.886	Haake, T.	.953
Frezzatti, W.A., Jr.	.894	Haddawy, P.H.	.254
Fridsma, D.B.	.597	Hadzikadic, M.	.930
Friede, A.M.	.408	Haeberlin, V.	.512
Friedman, C.	.537, 542, 938	Hahn, U.	.383
Friedman, C.P.	.2, 219, 279	Halamka, J.D.	.958
Frisby, A.J.	.909	Halper, M.	.274
Frisse, M.E.	.320	Hamilton, G.	.562, 922
Fueseschi, A.	.953	Hamlin, M.D.	.909
Fuller, L.F.	.901	Hammond, J.E.	.944
Fuller, S.	.850	Hammond, W.E.	.733, 807, 845
Fusielo, S.	.885	Hampton, R.H.	.853, 939
Gader, P.	.284	Hardin, L.	.881
Gaehde, S.A.	.860	Hardin, L.E.	.32
Galeazzi, E.	.115	Harris, K.	.844
Gallagher, R.J.	.209	Harris, L.	.989
Galvin, J.R.	.986	Harting, J.K.	.950
Ganju, A.	.84	Hasan, Z.	.987
Ganslandt, T.	.812, 892	Hashem, A.I.	.27
Gant, S.P.	.2	Hatz, D.A.	.986
Garcia, D.	.974	Hausam, R.R.	.831
Gardner, R.M.	.868	Haws, V.	.905
Gaspoz, J.M.	.899	Hayes, G.M.	.454, 463
Geissbühler, A.	.689	Hayes-Roth, B.	.244
Geller, J.	.274	Hayward, R.S.A.	.428, 929
Gennari, J.H.	.597	Heavisides, D.H.	.983
Gertman, P.	.860	Heerman, L.	.418, 868
Gettinger, A.	.983	Heermann, L.K.	.234
Ginsberg, M.	.978	Heffron, T.M.	.970
Giorgi, I.	.752	Heidenreich, P.A.	.60
Giuse, D.A.	.633	Heilberg, I.P.	.877
Giuse, N.B.	.836	Helmrick, K.J.	.950

Henneman, B.	860	Johnson, P.A.	983
Henry, S.B.	145	Johnson, S.B.	537
Herbst, S.A.	782	Johnson, S.M.	557
Hersh, W.R.	155, 159, 388, 552	Jones, R.B.	423, 957
Herskovits, E.	927	Jordan, D.	684
Heycke, T.E.	931	Jordan, E.M.	968
Hiltz, F.L.	704	Joubert, M.	378
Ho, L.C.	878	Kahane, S.N.	787
Hoelzel, D.	473	Kahn, C.E., Jr.	338, 478
Hoffer, E.	988	Kahn, R.M.	41
Hogan, T.	989	Kaiser, G.E.	577
Hogan, W.R.	517	Kan, W.K.	821
Hogeterp, J.A.	929	Kannry, J.	964
Hohnloser, J.H.	847, 856	Kannry, J.L.	838
Hole, W.T.	84	Kapaki, E.N.	869
Hollers, K.	936	Karlsson, D.	189
Holmes, C.J.	299	Karson, T.	942
Holmes, J.H.	883	Karson, T.H.	724
Holtmeier, R.R.	920	Kashyap, A.	904
Holzer, M.	856	Katz, F.R.	512
Honda, M.	907	Katzper, M.	823
Hornberger, J.C.	992	Ke, J.S.	878
Horsman, J.	428	Kearl, G.W.	914
Hripcak, G.	542	Keck, K.	926
Huang, M.	915	Keck, K.D.	84, 150, 901
Huber, M.	438	Keezer, P.	886
Huff, S.M.	90, 125, 900	Keller, J.	284
Hurdle, J.F.	130	Kennedy, R.S.	863, 971
Hurley, J.M.	704	Ketchell, D.S.	413
Hutchins, G.M.	328	Kilbridge, P.	608, 643
Huynh, P.N.	478	Kilman, D.G.	483, 990
Ibrahim, K.N.	413	Kim, R.J.	988
Imielin'ska, C.	949	Kinder, A.T.	234, 418
Ingernerf, J.	856	Kinder, T.	868
Inkster, J.A.	979	Kinney, J.L.	916, 974
Irons, R.J.	84	Kirby, J.	709
Jacques, L.B.	906	Kirin, G.	653
Jain, N.L.	542, 858	Kittredge, R.L.	628
Jakobovits, R.	304	Klimczak, J.C.	623
Jakobovits, R.M.	309	Knirsch, C.A.	542
Jankowski, T.A.	413	Kogelnik, A.M.	969
Jaworski, M.A.	12	Kohane, I.	729, 837
Jefferson, L.S.	911	Kohane, I.S.	608, 643, 968
Jenders, R.A.	567, 922	Kohli, H.	957
Jha, A.K.	828	Kolousek, G.	833, 834
Jimenez, A.	893	Komo, D.	886, 934
Johannes, R.S.	787	Konstan, J.A.	782
Johansson, B.	249	Köpcke, W.	822
Johnsen, V.	714	Kosinski, M.	830
Johnson, P.	592	Koton, P.A.	849

Kreider, N.	12	Lindberg, D.	989
Krescevic, D.	829	Lipow, S.S.	84, 150, 901, 902
Krol, M.	838	Lipscomb, D.S.	832
Kucharz, E.	733	Liu, C.H.	861
Kulikowski, C.A.	867	Liu, D.M.	861
Kuo, H.S.	861	Ljunggren, M.	503
Kuperman, G.J.	694, 709, 828	Lobach, D.F.	493, 807, 845
Kushinka, S.	972	Locatis, C.	887
Kushniruk, A.W.	22	Loke, E.	918
Kuzmak, P.M.	653	Long, W.J.	762
Labkoff, S.E.	942	Loonsk, J.	925
Lacey, D.L.	986	Loonsk, J.W.	970
LaFond, J.P.	849	Lorensen, M.	829
Laino-Pepper, L.	949	Lovis, C.	70, 899, 937
Laker, M.	259	Lowe, H.J.	314
Lam, S.H.	905	Lucchetti, G.	885
Lambert, J.G.	199	Lun, K.C.	918
Lancaster, J.L.	892	Lundy, M.S.	807, 845
Lang, W.P.	874, 876	Lyman, M.	547
Lange, L.L.	140	Lynn, K.L.	979
Langley, K.W.	970	Maag, K.	847
Langton, K.B.	428	MacWilliam, C.H.	438, 952
Larizza, C.	194	Madril, P.J.	857
LaRosa, M.P.	12	Maraqa, A.	398
Lau, L.M.	900	Marconi, R.	752
Lawson, R.	849	Marcus, S.M.	915
Lawson, R.R.	928	Mariotti, S.	885
Leão, B.F.	857	Marks, P.W.	498
Leape, L.L.	828	Marquardt, W.C.	12
Lee, D.	924	Marshall, T.	979
Lee, E.K.	209	Martin, M.	922
Lee, R.Y.	704	Mays, E.K.	259
Lee, W.	577	Mazur, E.	55
Lee, Y.N.	918	Mazzoleni, M.C.	752, 825
Leehy, M.A.	55	McCray, A.T.	164, 945
Lehmann, H.P.	433, 882	McDonald, C.J.	459, 989
Leitich, H.	833, 834	McDonald, K.M.	60
Lemmon, L.	989	McEnery, K.W.	37
Lenert, L.A.	992	McEwan, D.	873
Letcher, W.F.	930	McGowan, J.	897
Levine, B.A.	886	McHolm, G.	724, 942
Levy, C.	851	McKeown, K.	684
Levy, D.H.	962	Mead, C.N.	145
Lewis, C.	820	Medbery, R.	398
Lewis, R.J.	958	Meeks-Johnson, J.	989
Liang, B.	398	Meldrum, K.	975
Liang, C.	259	Mennecke, L.	953
Likar, B.	294	Mezrich, R.S.	867
Lin, L.	922	Michel, A.	777
Lincoln, M.J.	130, 870	Michel, P.A.	70, 899, 937

Mickish, A.	633	Nhàn, N.T.	547, 837
Miksich, S.	244, 592	Niland, J.	.893
Miller, B.	962	Niland, J.C.	.904
Miller, J.G.	219	Noble, W.	.893
Miller, P.L.	184, 835	O'Brien, P.R.	.925
Miller, R.A.	264, 689	O'Carroll, P.W.	.408
Miller, T.	219	O'Connell, E.M.	.498, 699
Mira, A.	194	O'Neil, M.	.110, 853
Missora, L.	527	Obeid, J.	.724, 942
Mitchell, J.A.	623	Odom-Maryon, T.	.904
Miton, F.	378	Oemig, F.	.841
Modayur, B.	309	Ohno-Machado, L.	.170, 924
Modayur, B.R.	304	Okada, M.	.448
Modjeddi, B.	890	Oles, F.J.	.259
Moidu, K.	55	Oliver, D.E.	.826
Molenda, S.	742	Oliver, R.E.	.887
Molholt, P.	41, 949	Olson, M.K.	.930
Moore, G.W.	328	Olson, N.E.	.84, 150, 901, 902, 956
Morgan, G.E.	199	Olson, N.S.	.926
Morris, A.H.	234, 418, 868	Overhage, J.M.	.459, 582, 989
Morris, D.	949	Owens, D.K.	.60
Morris, J.	972	Palcic, B.	.679
Morrison-Boczar, L.	895	Palombi, L.	.885
Mottram, D.A.J.	939	Papageorgiou, C.T.	.869
Mullins, H.C.	135	Papoulidis, T.P.	.869
Mun, S.K.	886	Pappas, J.J.	.628, 638
Munoz, R.	973	Parvantonis, P.	.824
Muriuki, M.	2	Patel, V.L.	.22, 125
Murphy, D.	879	Paterno, M.D.	.704, 872
Murphy, G.C.	219	Patrick, T.B.	.32, 393, 881
Murphy, S.	608, 643	Patterson, D.A.	.209
Murphy, S.L.	954	Paul, T.	.858
Murphy, S.N.	532	Payne, B.A.	.299
Murray, R.B.	909	Paz, I.B.	.904
Murray, R.J.	871	Pearson, J.	.423
Murri, N.A.	413	Pedraza, L.A.	.699
Murtaugh, M.P.	393	Pena, M.R.	.858
Musen, M.A.	150, 204, 587, 597, 987	Pepper, D.R.	.966
Naimi, S.	762	Perl, Y.	.274
Nair, S.	55	Pernus, F.	.294
Narcisi, J.	896	Petruzzi, P., Jr.	.135
Narus, S.P.	767	Phillips, R.L.	.483, 990
Naus, G.J.	314	Pincioli, F.	.527
Naven, L.	957	Piper, P.S.	.871
Neiswanger, M.	820	Plaisant, C.	.884
Nelson, B.	973	Pole, P.M.	.100
Nelson, S.J.	84, 150, 901, 902	Pollard, D.	.733
Nelvagal, S.	852	Polonkey, S.E.	.314
Newsom, K.A.	832	Powsner, S.M.	.835
Ngo, L.H.	254	Pretschner, D.P.	.953

Price, C.	110, 853, 854, 855	Ross, S.A.	428
Priebe, J.S.	970	Rosse, C.	304
Prokosch, H.U.	822	Rossi Mori, A.	115
Prothero, J.	304	Roth, S.M.	37
Prothero, M.	905	Rothenfluh, T.	833
Pryor, T.A.	767	Rothenfluh, T.E.	834
Purcell, G.P.	931	Rothwell, D.J.	80
Püschel, N.	403	Rucker, D.W.	787
Quade, G.W.	403	Ruiz, M.	623
Quantin, C.	323	Ruland, C.M.	829
Qian, X.L.	120	Russman, A.N.	438, 952
Quinlan, P.	915	Rutledge, G.W.	967
Quirologico, S.	175	Saba, V.K.	936
Raila, W.F.	638	Saddler, C.	653
Ramesh, V.	175	Safadi, Y. al	684
Ramos, M.	877	Safran, C.	608, 643, 848, 985
Ramsey, A.	897	Sager, J.T.	873
Randolph, A.G.	234	Sager, N.	547
Rappaport, A.	463	Sailor, M.	868
Rappaport, S.H.	648, 916, 974	Sailor, R.M.	418
Rassinoux, A.M.	70, 264	Sailors, R.M.	234, 955
Rathe, R.	947	Salmon, P.	463
Razi, A.	945	Sanders, G.D.	60
Razi, A.M.	164	Sanderson, H.F.	75
Read, G.	855	Sands, D.	860
Read, J.D.	75	Sands, D.Z.	985
Rector, A.L.	100, 709	Sarathy, V.	120
Reece, W.S.	849	Sargious, P.	860
Reid, J.A.	408	Sato, L.	724, 942
Reid, J.C.	887	Satomura, Y.	907
Remz, J.B.	747	Sayward, F.G.	184
Rennels, G.	269	Scanland, P.M.	135
Renshaw, S.	905	Schaffer, J.	942
Richard, N.N.	946	Schaffer, J.L.	724
Richards, R.R.	438, 952	Scherrer, J.R.	70, 264, 899, 937
Riechmann, G.	822	Schewe, S.	903
Rind, D.	608, 643	Schindler, J.	643, 837
Rind, D.M.	848, 985	Schlesinger, J.M.	572
Rindflesch, T.C.	239	Schmitt, S.M.	827
Rishel, W.	95	Schmitz, J.L.	498
Rittenberg, E.	828	Schnattinger, K.	383
Riva, A.	179, 194	Schneider, M.A.	852
Rizzolo, M.A.	982	Schor, N.	877
Robert, J.	378	Schulz, E.	939
Rocha, R.A.	90, 900	Schulz, E.B.	110, 853
Rodriguez, E.	582	Schwabbauer, M.	986
Rodriguez, M.	919	Seger, D.	828
Romacker, M.	383	Seger, D.L.	872
Roscoe, D.A.	714	Seiver, A.	812, 943
Rose, A.	884	Séroussi, B.	488

Séroussi, B.	.488	Steffen, D.L.	.891, 911
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Shahar, Y.	.204, 592	Stein, S.	.840
Shahsavar, N.	.249	Steinberg, I.	.55
Shahzad, C.	.562	Steiner, K.	.973
Shahzad, C.M.	.922	Stephan, E.	.915
Shank, R.R.	.928	Stewart, M.	.892
Shareck, E.P.	.343	Stitt, F.W.	.919
Shareck, P.	.942	Stoufflet, P.E.	.924
Shea, B.	.828	Strain, J.J.	.812, 943
Sherertz, D.D.	.84, 150, 901, 902, 926, 956	Strasberg, H.R.	.921
Sherman, E.	.792	Stuart-Buttle, C.D.G.	.75
Sherman, E.H.	.577	Suarez, H.H.	.878
Shiffman, R.N.	.835	Suarez-Munist, O.N.	.84, 150, 902
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Shulman, L.N.	.498	Sundaram, A.	.368
Sigulem, D.	.857, 877	Survance, G.	.895
Silva, M.	.175	Sutton, Y.M.	.75
Simon, L.	.875	Suzuki, T.	.907
Simos, A.V.	.869	Swan, J.E., II	.674
Sims, K.P.	.917	Sweeney, L.A.	.333
Singh, J.	.973	Swencionis, C.	.978
Siren, P.	.860	Swobada, W.	.903
Sittig, D.F.	.694	Swoboda, W.J.	.847
Siu, Y.T.	.821	Szolovits, P.	.608, 643, 837
Skinner, C.	.961	Tafazzoli, A.G.	.512
Skinner, D.	.961	Takaba, M.	.448
Slack, W.V.	.985	Takabayashi, K.	.907
Sliwinski, R.T.	.983	Tan, E.L.	.918
Smejko, N.	.853	Tan, T.W.	.918
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